

## **SUPPORTING INFORMATION**

### **Microfluidic Chip for Detection of Fungal Infections**

Waseem Asghar<sup>1,2,\*</sup> Mazhar Sher,<sup>1,2</sup> Nida S. Khan,<sup>3</sup> Jatin M. Vyas,<sup>3</sup> Utkan Demirci<sup>4,\*</sup>

<sup>1</sup>Asghar-Lab, Micro and Nanotechnology in Medicine, College of Engineering and Computer Science, Boca Raton, FL 33431

<sup>2</sup>Department of Computer & Electrical Engineering and Computer Science, Florida Atlantic University, Boca Raton, FL 33431

<sup>3</sup>Division of Infectious Disease, Massachusetts General Hospital, Harvard Medical School, Boston, MA 02115

<sup>4</sup>Bio-Acoustic MEMS in Medicine (BAMM) Laboratory, Canary Center at Stanford for Cancer Early Detection, Department of Radiology, School of Medicine, Stanford University, Palo Alto, CA 94305

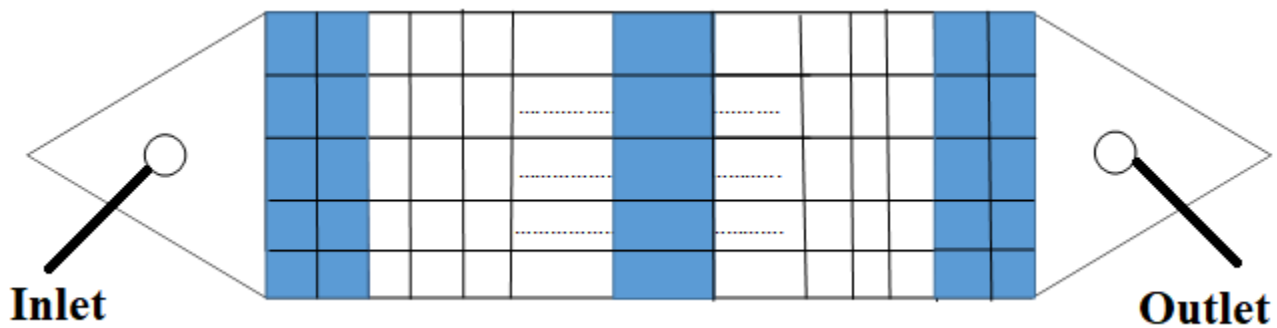
\* Corresponding Authors Email: [wasghar@fau.edu](mailto:wasghar@fau.edu) and [utkan@stanford.edu](mailto:utkan@stanford.edu)

### Quantification of captured *Candida*:

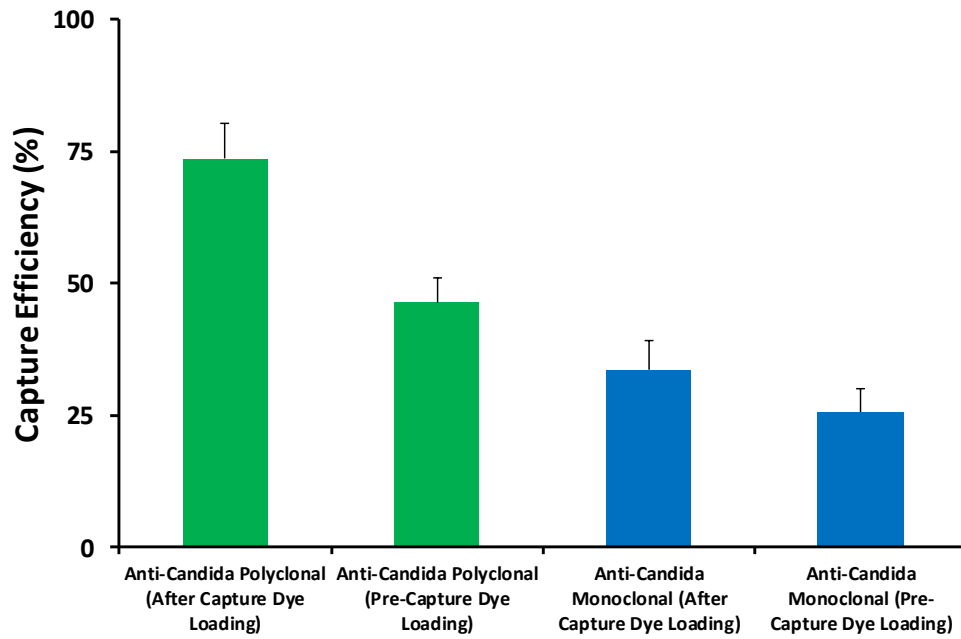
Although, captured *Candida albicans* were counted manually. The microfluidic device was designed in such manner that it had engraved markings on the outermost layer, so, the microfluidic channel was divided into various rectangular regions (1,000 microns by 1,000 microns area), then counting process was accomplished by considering three different regions:

- 1) Near to inlet
- 2) Center of device
- 3) Near to outlet

The regions marked blue in supplementary Figure 1 were counted and then the values were normalized.



**Supplementary Figure 1.** Illustration of cell counting process used for *Candida* counts captured inside microfluidic channels.



**Supplementary Figure 2.** Capture efficiencies of *Candida albicans* stained with FITC conjugated anti-*Candida* antibody pre and post-capture. The *Candida* strain utilized was not producing GFP. The *Candida* concentration was  $3 \times 10^5$  cfu/ml of buffer.